

## ABSTRACT

An eccentricity compensating apparatus of a disk drive servo system using frequency response characteristics of an actuator actuating a head to a position on a disk to read data on or reproduce data from the disk. The apparatus includes an error detector that detects a position error between a reference head position and an actual position of the head on the disk and a first compensation controller that receives the position error from the error detector and changes the actual position of the head to compensate for the position error. The apparatus also includes a second compensation controller that generates and outputs a control value to compensate for eccentricity which varies depending on a phase of a spindle that rotates the disk, and a gain/phase adjuster that adjusts gain and phase of the control value output from the second compensation controller according to a disk reproduction speed, wherein a drive signal of the actuator is obtained by summing together signals output from the first compensation controller and the gain/phase adjuster. Thus, the eccentricity compensation apparatus compensates for eccentricity at varying reproduction speeds by adjusting control data estimated for eccentricity compensation at specific reproduction speed based on frequency response characteristics of an actuator.